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Sharon Mi Lyn Tan

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EXAMINER

AZPURU, CARLOS A

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/631,871  
Filing Date: July 31, 2003  
Appellant(s): TAN, SHARON MI LYN

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Rosemary M. Miano  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 03/15/2010 appealing from the Office action mailed June 2, 2009.

**(1) Real Party in Interest**

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The following is a list of claims that are rejected and pending in the application:  
1-23.

**(4) Status of Amendments After Final**

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

**(5) Summary of Claimed Subject Matter**

The examiner has no comment on the summary of claimed subject matter contained in the brief.

**(6) Grounds of Rejection to be Reviewed on Appeal**

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umemura et al (4,902,503) in view of Trogo et al (US2003/0118664), both in view of McGlothlin et al (6,329,444).

**(7) Claims Appendix**

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

**(8) Evidence Relied Upon**

No evidence is relied upon by the examiner in the rejection of the claims under appeal.

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umemura et al (4,902,503) in view of Trogolo et al (US2003/0118664), both in view of McGlothlin et al (6,329,444).

The inclusion of antimicrobials such as silver in both natural and synthetic rubbers is disclosed by Umemura et al (see Abstract; claims). Heat curing (analogous to vulcanizing) is described at col. 5, lines 61-64. Umemura et al does not teach the encapsulation of the incorporated antimicrobials.

Trogolo teaches the microencapsulation of antimicrobial agents using hydrophilic polymers (see Abstract). The polymers used for encapsulation are listed from [0050] –

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[0065]. The antimicrobial and encapsulating polymer are blended together at [0066] to create a dispersed bioactive within the microcapsule. The inclusion of zeolite containing silver ions is disclosed at [0040]. Microcapsule diameter is disclosed at [0057] and clearly overlaps. Trogolo et al lacks a specific teaching of adding the antimicrobial microparticles to a rubber, but has a generic teaching of using them in polymers generically [0068]. Those of ordinary skill would have found it well within their skill to microencapsulate the antimicrobial found in Unemura et al in view of the teachings of Trogolo et al. which discloses the use of antimicrobial microparticles in various polymers.

Neither patent discloses that medical devices can be made from natural and synthetic rubbers, and additionally, the these rubbers can be dip molded. McGlothlin et al disclose both (see Abstract; col. 7, lines 45-49). Therefore, it would have been within the skill of the ordinary practitioner to microencapsulate antimicrobials in a latex as taught by Unemura et al in view of Trogolo et al, and further to form the instantly claimed medical devices through dip molding as taught by McGlothlin et al with a reasonable expectation of similar antimicrobial results. The instantly claimed latex with incorporated antimicrobial microparticles and method of making said latex would have therefore been obvious to one of ordinary skill at the time of invention given the teachings of Unemura et al in view of Trogolo et al, both in view of McGlothlin et al .

#### **(10) Response to Argument**

As noted in the advisory action, applicant appears to be arguing each reference separately, and argues that Unemura teaches the use of dissolved (water-soluble)

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silver, as opposed to a dispersed form of the instant claims. As stated in the action of 12/11/2008, Unemura et al is used to teach the inclusion of antimicrobials such as silver in both natural and synthetic rubbers. It was not used to teach encapsulation of the incorporated antimicrobials. Unemura also teaches many release modulating polymers which fit the definition of "latex" as set out by applicants.

With regard to Trogolo et al, applicant argues that Trogolo et al does not disclose "latex" and further, that Trogolo's process teaches away from their use. First, as previously pointed out, Trogolo et al includes many of the polymers applicant defines as latex, and includes a teaching of microencapsulation of antimicrobials. The formation of microparticles would read on applicant's limitation of "dispersed", since the antimicrobials would no longer simply be dissolved in the polymer. Applicant is also attempting to differentiate the instant claims by the thermal/melt processing used by Trogolo et al. However, it is noted that applicant uses "heat curing " in claim 5. Further, the remaining claims do not differentiate by process of making, so applicant is arguing limitations not found in the instant claims.

Therefore, it is not agreed that the combination of Unemura and Trogolo is not proper and involves hindsight reasoning. As stated in the rejection Unemura was used solely for its teaching of the combination of antimicrobials in natural and synthetic rubbers, many of which fall into applicant's definition of "latex". The Trogolo reference then teachings that microencapsulation of antimicrobials , using these same "latex" polymers is well known.

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Lastly, McGlothlin was used to show that the polymers taught by Unemura and Trogolo are well known for use in dip molding. The process is determined by the polymers, not the microencapsulation or the antimicrobials. That feature has already been shown by Unemura and Trogolo et al. As such, the combined teachings show that the instant invention would have been obvious to one of ordinary skill in the art at the time of invention given the teachings of Unemura in view of Trogolo, both in view of McGlothlin et al.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Carlos A Azpuru/  
Primary Examiner, Art Unit 1615

Conferees:

/Robert A. Wax/  
Supervisory Patent Examiner, Art Unit 1615

/Kay Kim/  
Primary Patent Examiner